



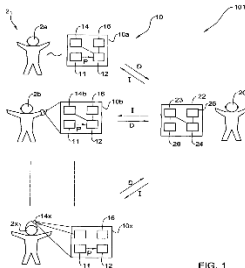


## CLAIM CHART

## U.S. PATENT NO. 7,980,998 – CLAIM 1

Claimed Limitation	Specification Support	Corresponding Structure in Accused Systems – Fitbit
<b>Claim 1</b>		
[1] A personal device for measuring a training activity of a trainee having a body part which moves and changes its location and orientation, during said training activity, this movement at least partially defining said training activity, said device comprising:		<p>Fitbit sells the Fitbit Charge 6. The Fitbit Charge 6 is a wearable training device.</p> <div><div><div>charge 6</div><div>\$159.95</div><div><div>Klarna.</div><div>4 interest-free payments of \$39.98. <a href="#">Learn More</a></div></div><div>Bundle &amp; save on a 1 year Premium membership*</div><div>Google account required. <a href="#">Learn more</a></div></div><div><div>Boost your routine with our #1 fitness tracker. Now with our most accurate heart rate, plus Google essentials like Maps, Wallet and YouTube Music controls.<sup>3 6 11</sup></div><div>Colors</div><div><div></div><div></div><div></div></div><div>Obsidian / Black Aluminum</div></div><p><b>Source:</b> <a href="https://www.fitbit.com/global/us/products/trackers/charge6">https://www.fitbit.com/global/us/products/trackers/charge6</a></p></div>
[1a] a sensing unit adapted to repeatedly measure, during said training activity, parameters associated with the movement of said body part and characterizing the location and orientation of said body part relative to its initial	<p>Item 11 in Figure 1 depicts a sensing unit.</p> 	<p>The FitBit Charge 6 is a sensing unit containing sensors.</p>

location and orientation, and

[1b] wherein said sensing unit comprising at least accelerometer means,

Item 80 in Figure 2B depicts an accelerometer means.

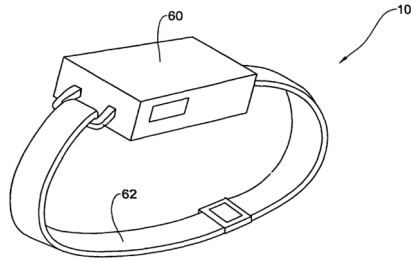


FIG. 2A

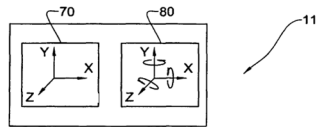


FIG. 2B

The Charge 6 contains a 3-axis accelerometer.

## Sensor Guides

Each Fitbit device includes a variety of hardware sensors that have been exposed through our Sensor APIs.

The purpose of these guides is to provide an introduction to these hardware sensors to allow developers to begin utilizing these powerful APIs with minimal effort. Guides are available for the following sensors:

### Accelerometer

Accelerometers can be used to measure device acceleration, and determine orientation.

### Heart Rate

The Heart Rate sensor measures a person's heart rate in 'Beats per minute'.

### Barometer

A Barometer is used in meteorology to measure atmospheric pressure and forecast short term changes in the weather.

### Orientation

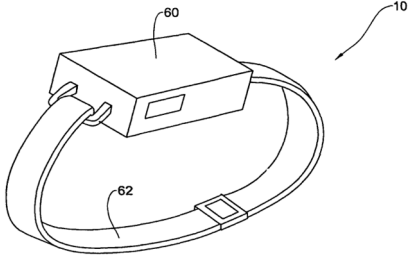
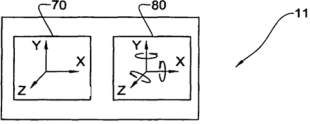
An Orientation sensor measures the orientation of a device relative to an orthogonal coordinate frame.

### Gyroscope

The Gyroscope sensor measures the device's angular velocity along 3 orthogonal axes (X, Y and Z).

## Sensors & Components

- Optical heart rate monitor
- 3-axis accelerometer
- **Built-in GPS** + GLONASS

<p>[1c] a compass and</p>	<p>A compass is not individually shown. The Detailed Description of the Embodiments states, “[t]he sensing unit 11 may comprise accelerometers, gyroscopes, compasses or any combination thereof.” And again, “a compass (not shown) may be used whose advantage is in that its measurements are provided relative to the earth electromagnetic field as an external reference point (outside the sensor).”</p>	<p>The Charge 6 includes an Orientation Sensor which “measures the orientation of a device relative to an orthogonal coordinate frame.” See above</p> <p>An Orientation Sensor typically includes a magnetometer which is a “compass” and operates relative to the Earth’s magnetic field to provide data to the Orientation Sensor for use in combination with an accelerometer and a gyroscope. (See W3C Orientation Sensor - publications)</p>
<p>[1d] optionally gyroscope means,</p>	<p>Item 70 of Figure 2B depicts a gyroscope means.</p>  <p>FIG. 2A</p>  <p>FIG. 2B</p>	<p>See section [1b] above</p>

[1e] a means for attaching the sensing unit to said body part; and

Figure 3 depicts several means for attaching the sensing (11) unit to a body part.

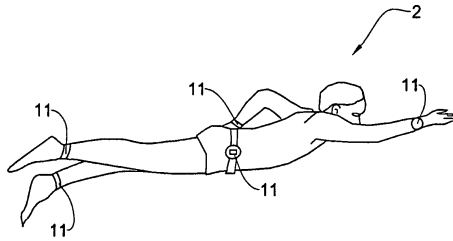


FIG. 3

Included with the Fitbit Charge 6 is an Infinity band (small and large) that functions to attach the Charge 6 to the body.



[1f] a processor adapted to receive from the sensing unit said parameters, and to calculate based thereon, data indicative of said training activity, said data including at least the location and orientation of said body part for [e]ach of the measurements.

Item 12 in Figure 1 depicts a processor.

The Fitbit Charge 6 must contain a processor located within the watchface that receives and performs calculations on the data received from the sensing units.

See for example:



Fitbit Sense FBT18SW Processor